Cat.6a Hirose TM31 Patchkabel

Art.-Nr. K8560XX.x

mit S/FTP PIMF DRAKA UC900 1000 MHz Kabel					
K8560GR.X	grau	**K8560SW.X**	schwarz	**K8560GN.X**	grün
K8560BL.X	blau	**K8560OR.X**	orange	**K8560WS.X**	weiss
K8560RT.X	rot	**K8560GE.X**	gelb		

- 2 x Hirose TM31, Cat.6a, halogenfrei
- Belegung nach TIA/BA 568B

Lieferbare Längen in Meter:
0.5 - 1.0 - 1.5 - 2.0 - 3.0 - 5.0 - 7.5 - 10.0 - 15.0 - 20.0 - 25.0 - 30.0

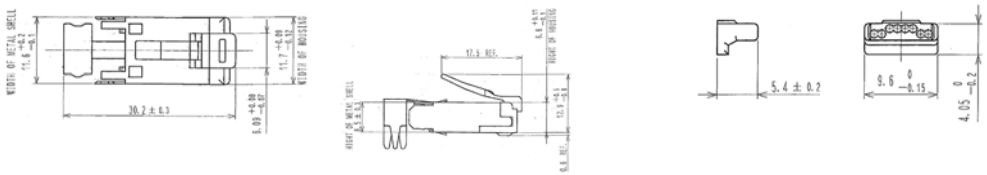
- **Einsatzgebiete:**
  Tertiär (Horizontal)
  IEEE802.3: 10Base-T; 100Base-T; 1000Base-T; **10GBase-T**
  IEEE802.5: 16 MB; ISDN; TPDDI; ATM

- **Geltende Normen:**
  EN-50173-1; EN-50288-4-2

- **Flammwidrigkeit LSHF(FRNC):**
  IEC 60332-1; IEC 60754-2; IEC 61034

Komponenten (Stecker):

- 2 x 37642.S - Hirose TM31DP Cat.6a Stecker
- 2 x 37642.P - TM31-88(62) Guide plate
- 2 x 37641.x Knickschutztülle TM21 (gr, sw, rt, gn, bl, ge, or)



Komponenten (Kabel):

- 99704.1 - Patchkabel Cat.7 PiMF UC900 S/FTP

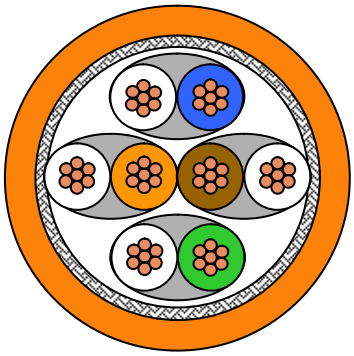
Kabelaufbau	
Leiter	Cu-Litze, blank d=0.42 mm (AWG 27/7)
Isolierung	Foam-Skin Polyethylen, d=0.98 mm
Verseilung	2 Adern zum Paar
Verseilung zur Seele	Aluminium-beschichtete Kunststoff-Verbundfolie
Gesamtabschirmung	Cu-Geflecht verzinnt (ca. 45 % Bedeckung)
Schutzmantel	PVC oder LSHF, Farbe siehe Typentabelle

RoHS konform

Created MN	Date 29.09.09	**Patchkabel Cat.6a Hirose TM31 K8560XX.x**	File: K8560XX.x_DE
Last rev. MN	Date 29.09.09		EFB ELEKTRONIK

UC900 SS27 Cat.7

S/FTP



Einsatzgebiete

Tertiär (Horizontal)
IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T; **10GBase-T**
IEEE 802.5 16 MB; ISDN; TPDDI; ATM

Geltende Normen

EN 50173-1; EN 50288-4-2
ISO/IEC 11801; IEC 61156-5

Flammwidrigkeit

LSHF(FRNC): IEC 60332-1; IEC 60754-2; IEC 61034

Kabelaufbau

Leiter	Cu-Litze, blank Ø 0,42 mm (AWG 27/7)
Isolierung	Foam-Skin Polyethylen, Ø 0,98 mm
Verseilung	2 Adern zum Paar
Paarabschirmung	Aluminium-beschichtete Kunststoff-Verbundfolie
Verseilung zur Seele	4 Paare (PiMF) zur Seele
Gesamtabschirmung	Cu-Geflecht verzinnt (ca. 45 % Bedeckung)
Schutzmantel	PVC oder LSHF, Farbe siehe Typentabelle

UC900 SS27 Cat.7

Mechanische Eigenschaften

Biegeradien	ohne Zugbelastung	≥ 25 mm
	mit Zugbelastung	≥ 50 mm
Betriebstemperaturenbereich	ruhend	-20°C bis + 60°C
	bewegt	0°C bis + 50°C

Elektrische Eigenschaften

bei 20°C± 5°C

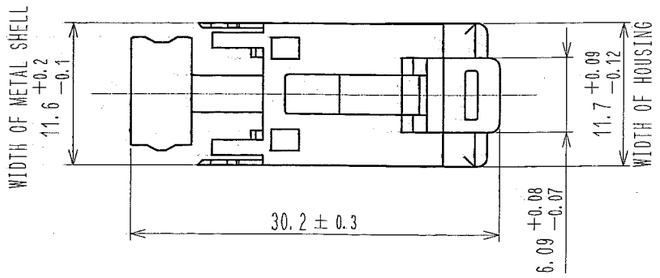
Schleifenwiderstand		≤ 340 Ω /km
Widerstandsunsymmetrie		≤ 3%
Isolationswiderstand	(500 V)	≥ 2000 MΩ *km
Kapazität	bei 800 Hz	Nom. 43 nF/km
Kapazitätsunsymmetrie	(Paar/Erde)	≤ 1500 pF/km
Wellenwiderstand	(1-100 MHz)	(100 ± 15) Ω
	(100 - 250) MHz	(100 ± 18) Ω
	(250 - 600) MHz	(100 ± 25) Ω
Relative Ausbreitungsgeschwindigkeit		ca. 79 %
Signallaufzeit		≤ 427 ns/100m
Laufzeitunterschied		≤ 12 ns/100m
Prüfspannung	(DC, 1 min) Ader/Ader und Ader/Schirm	1000 V
Kopplungswiderstand	bei 1 MHz	≤ 25 mΩ /m
	bei 10 MHz	≤ 15 mΩ /m
	bei 30 MHz	≤ 30 mΩ /m

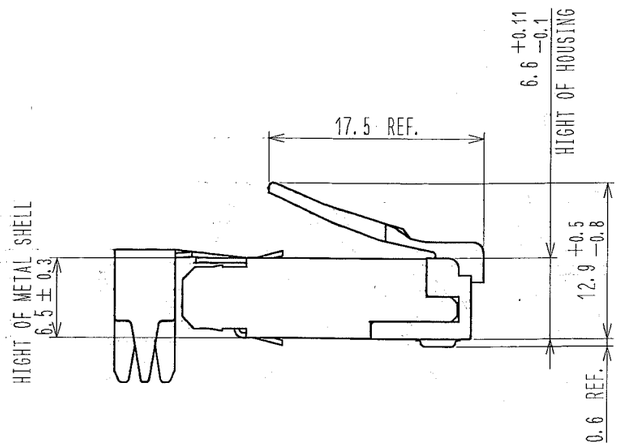
Elektrische Daten (nominal)

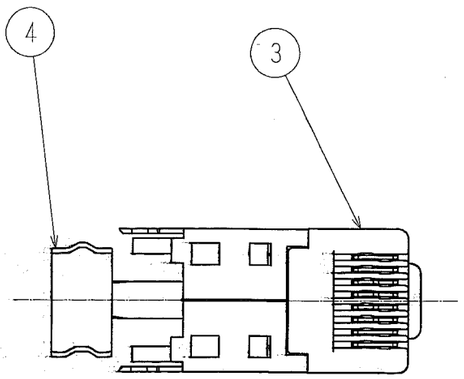
gem. Cat.7 (bei 20°C)

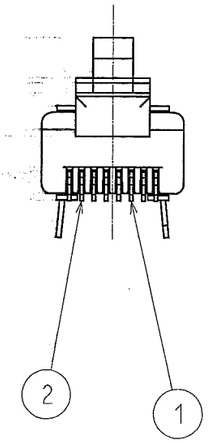
F (MHZ)	Attenuation (dB/100m)	NEXT (dB)	PS-NEXT (dB)	ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	Return loss (dB)
1,0	0,3	90	87	90	80	77	23
4,0	0,6	90	87	89	80	77	24
10,0	1,0	90	87	89	80	77	25
16,0	1,3	90	87	89	76	73	25
20,0	1,4	90	87	89	74	71	25
31,2	1,8	90	87	88	70	67	25
62,5	2,6	90	87	87	64	61	23
100,0	3,2	87	84	84	60	57	21
125,0	3,6	85	82	81	58	55	20
155,5	4,0	84	81	80	56	53	19
175,0	4,3	83	80	79	55	52	19
200,0	4,6	82	79	77	54	51	18
250,0	5,1	81	78	76	52	49	18
300,0	5,6	80	77	74	50	47	17
450,0	6,9	77	74	70	47	44	17
600,0	7,9	75	72	67	44	41	17
750,0	8,7	73	70	64	42	39	
900,0	9,7	72	69	62	41	38	
1000,0	10,2	71	68	61	40	37	

	COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE		COUNT	DESCRIPTION OF REVISIONS	BY	CHKD	DATE
△					. .	△					. .
△					. .	△					. .
△					. .	△					. .

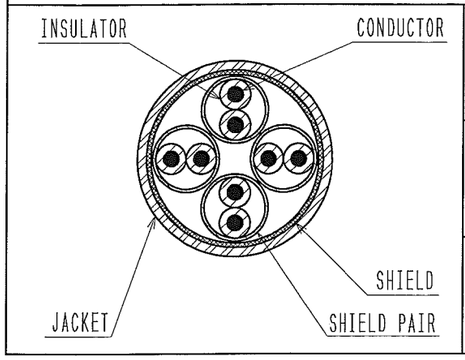






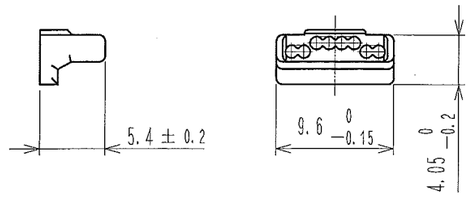


APPLICABLE CABLE



CONDUCTOR	AWG#24 TO #26
INSULATOR OUTER DIAMETER	φ0.9 TO φ1.0
JACKET OUTER DIAMETER	φ5.8 TO φ6.0

⑤ ATTACHED



1~2	PHOSPHOR BRONZE	CONTACT: Au 1.27μm min OTHER: Au 0.03μm min UNDER: Ni 2μm min	4	POLYCARBONATE	(CLEAR YELLOW)
			3	STAINLESS STEEL	Ni 0.5μm min
			2	POLYCARBONATE	(CLEAR YELLOW)
NO.	MATERIAL	FINISH, REMARKS	NO.	MATERIAL	FINISH, REMARKS

CODE NO.(OLD)	DRAWN	DESIGNED	CHECKED	APPROVED	RELEASED
DRAWING FOR REFERENCE OR PRELIMINARIES	M. Itano '08·07·18	M. Itano '08·07·18	H. Yamaha '08·07·18	Y. Enomi 08·07·18	ENG 08.7.18 DEPT

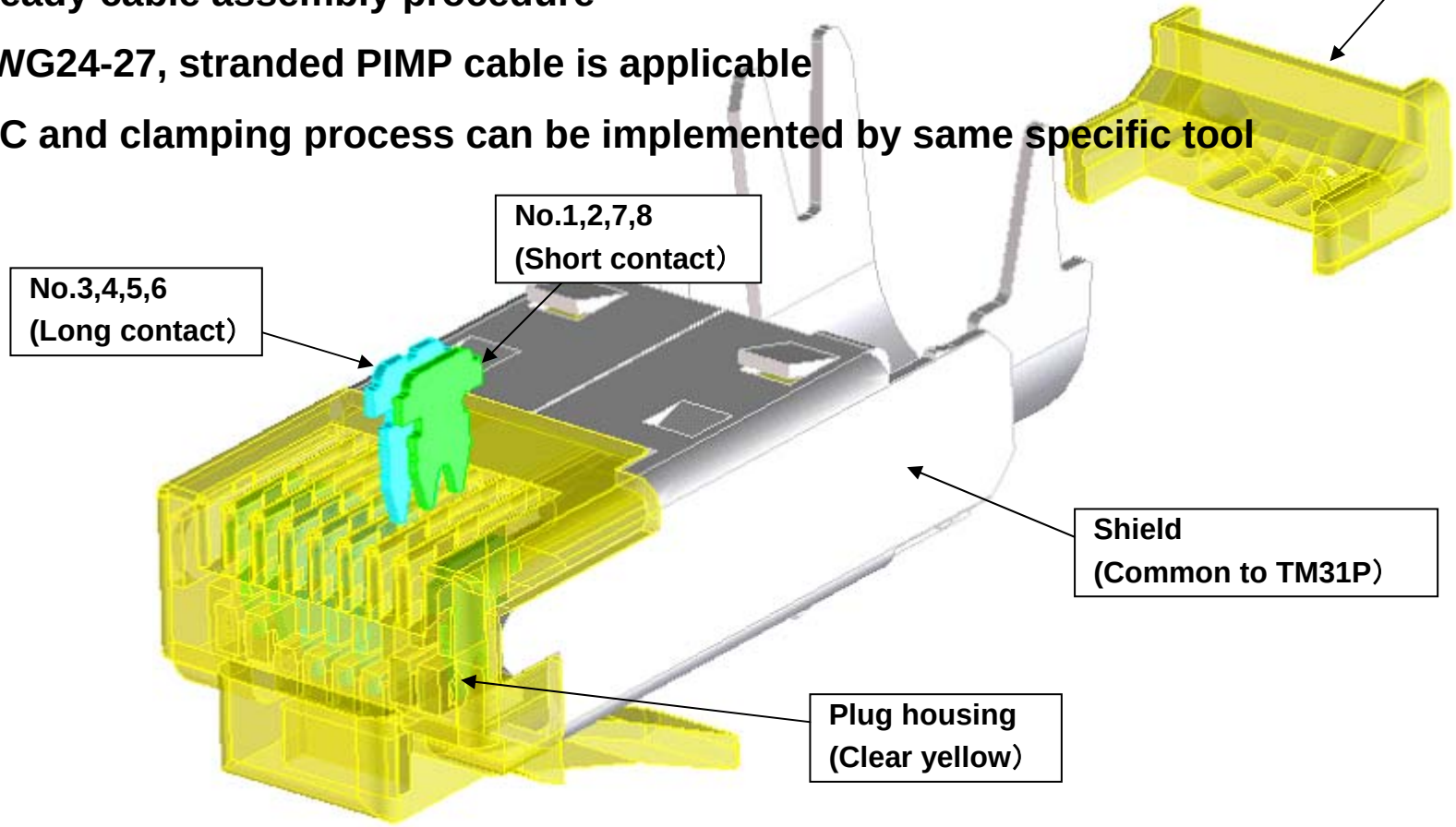
SCALE	DRAWING NO.	PART NO.
2 : 1	TEDC3-123817	TM31P-88P
UNITS: mm	HRS HIROSE ELECTRIC CO., LTD	CODE NO. CL222 — 1/1

FORM NO. 229 Q

TO
Q

Plug ：TM31P-TM-88P

1. Plug design satisfying CAT6a performance
   (No.1,2,7,8⇒short contacts /No.3,4,5,6⇒long contacts)
2. Simplified assembly method by guide plate
3. Steady cable assembly procedure
4. AWG24-27, stranded PIMP cable is applicable
5. IDC and clamping process can be implemented by same specific tool



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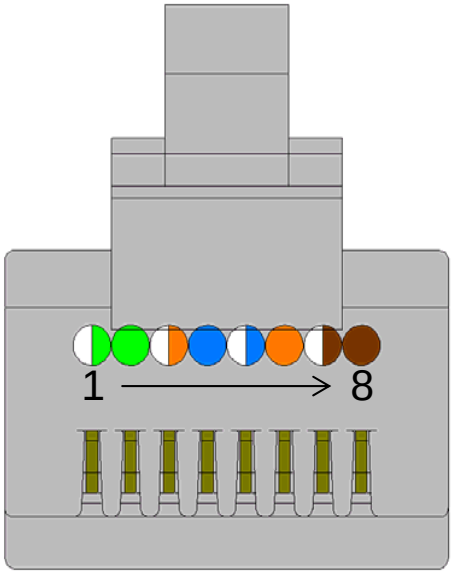
Plug ：TM31P-TM-88P

Plug design satisfying CAT6a requirements

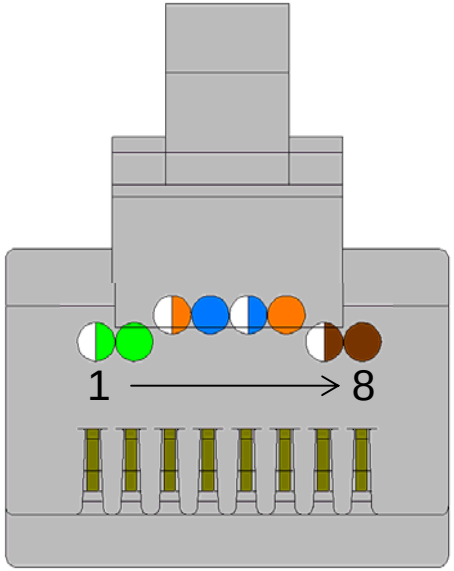
1) Unique contact arrangement

CAT6 Plug (TM21DP-TM-88P)



Improved Transmission Characteristics

CAT6a Plug (TM31P-TM-88P)



Limited performance due to the contact arrangement in a single row

The contact arrangement in two rows makes performance improved (No3, 4, 5, 6 contacts are isolated from No1, 2, 7, 8 contacts)

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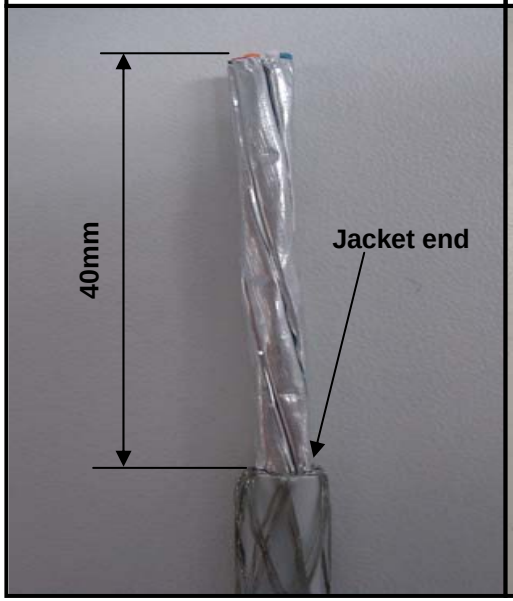
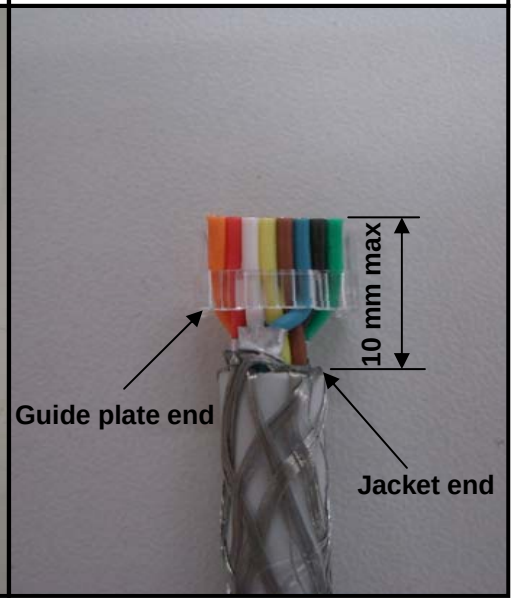
Plug ：TM31P-TM-88P

Cable assembly method to have CAT6a performance

Plug design makes it possible for users to lengthen jacket end and have steady CAT6a performance.

Step1	*Step2*	*Step3*
		

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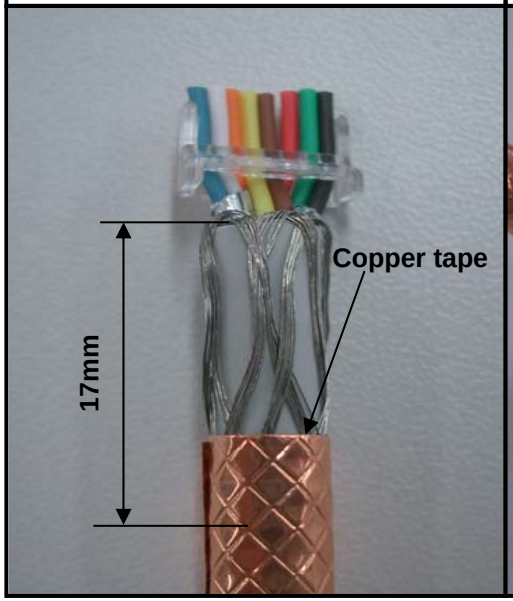
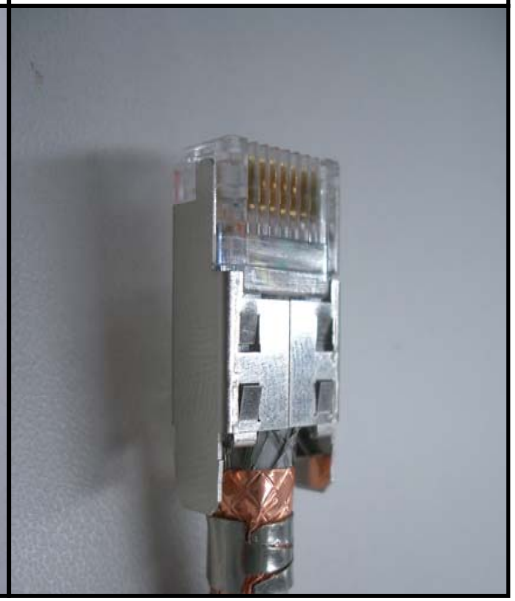
Plug ：TM31P-TM-88P

Cable assembly method to have CAT6a performance

Plug design makes it possible for users to lengthen jacket end and have steady CAT6a performance.

Step4	*Step5*	*Step6*
		

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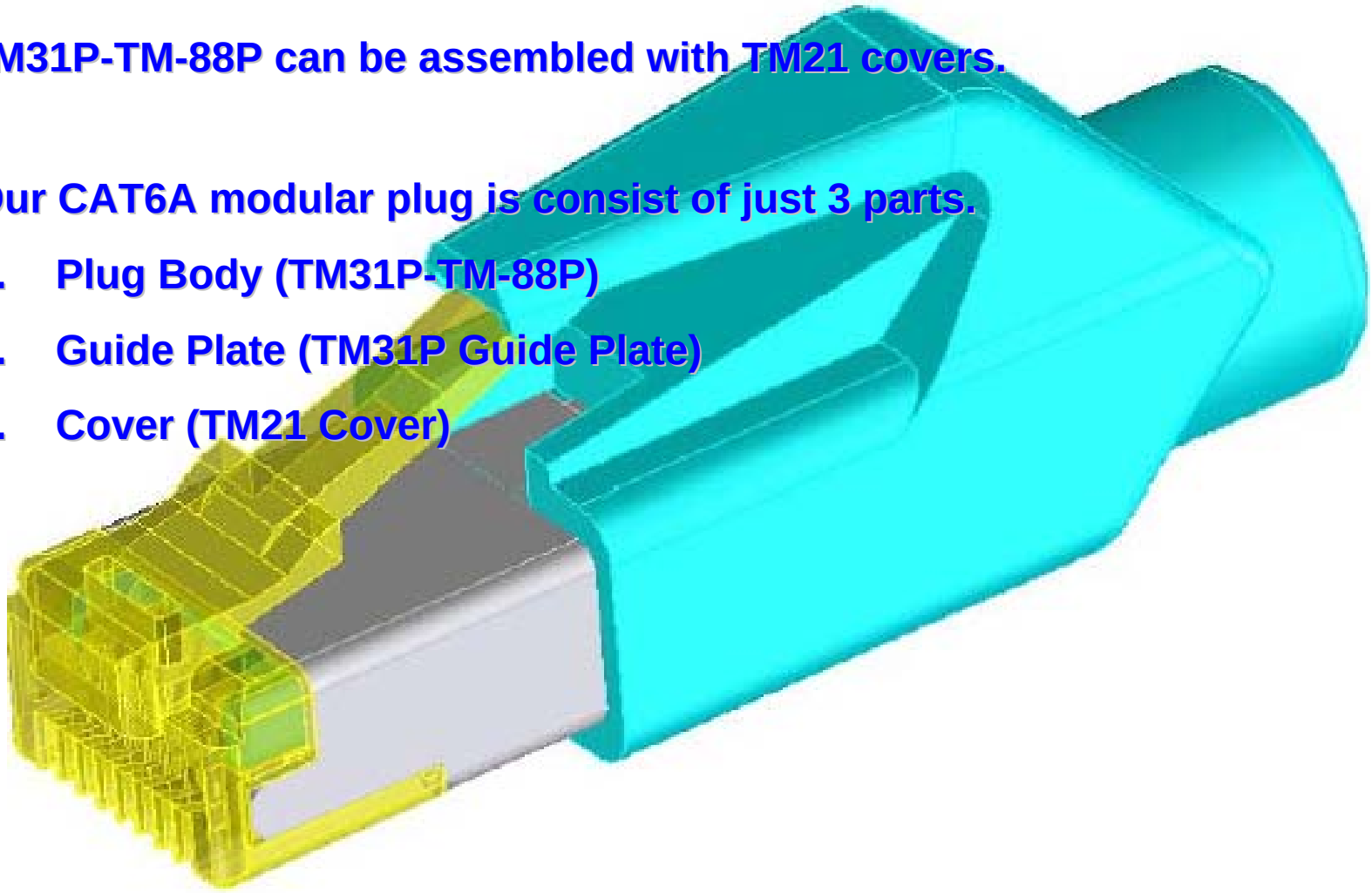
Plug ：TM31P-TM-88P

Outer Appearance of TM31P-TM-88P with cover

TM31P-TM-88P can be assembled with TM21 covers.

Our CAT6A modular plug is consist of just 3 parts.

1. **Plug Body (TM31P-TM-88P)**
2. **Guide Plate (TM31P Guide Plate)**
3. **Cover (TM21 Cover)**



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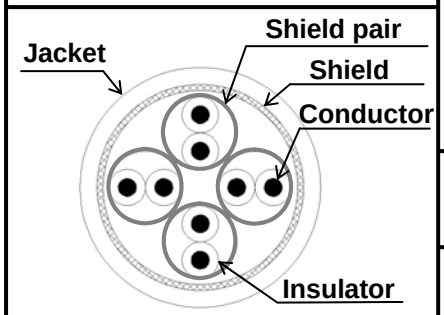
Plug ：TM31P-TM-88P

Applicable Cable

PIMF cable		
	Conductor	AWG 24 stranded wire
		AWG 27 stranded wire
	O/D of Insulator	ϕ0.9 to ϕ1.0
	O/D of Jacket	ϕ5.8 to ϕ 6.0

Cable Assembly Tool

Cable Assembly Tool of TM21DP-TM-88P can be also used for TM31P-TM-88P

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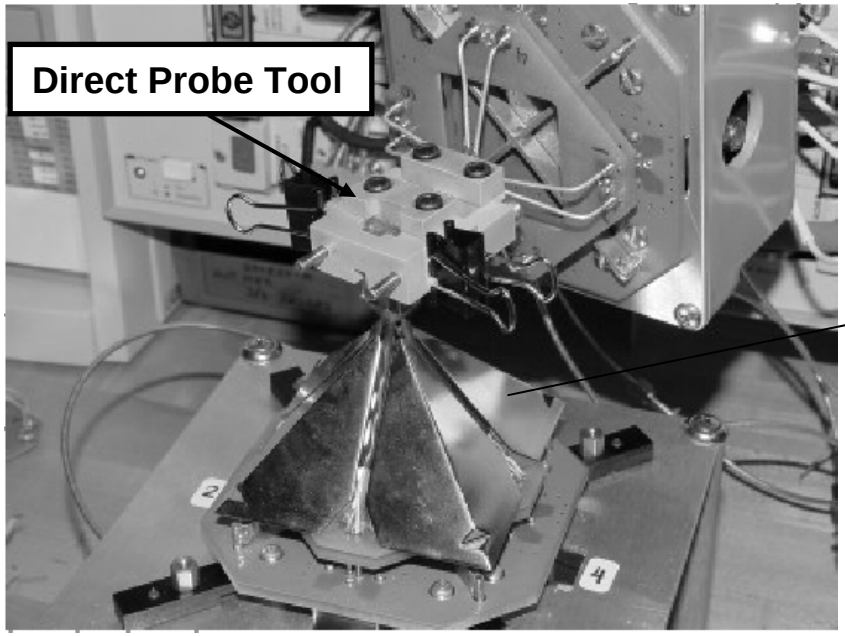
Plug ：TM31P-TM-88P

CAT6a Performance Measurement : Plug single

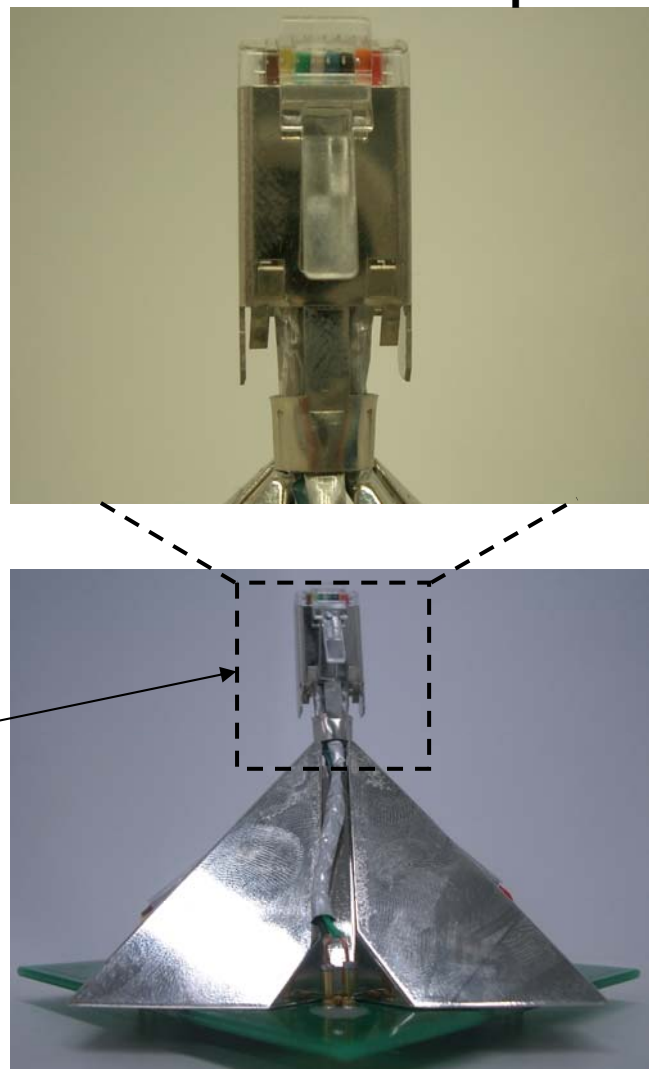
Measurement Method : Direct Probe Method

Measurement Equipment : Network Analyzer (Agilent E8357A)

Frequency : 10～500MHz



TM31P Model sample



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